

ABSTRACT

5       A composition for treating periodontal disease by means of a  
therapeutic agent delivery device placed within the periodontal pocket so that  
release of the therapeutic agents occurs in the immediate vicinity of the disease  
process, without that a release adjusting agent or adhesive agent is present so that  
biocompatibility or allergic problems cannot arise. The composition comprises a  
therapeutic agent in a biocompatible polymeric material. The therapeutic agent is  
10       soluble both in water and in alcohol and the biocompatible polymeric material is  
a liquid methacrylate copolymer such as EUDRAGIT<sup>®</sup> RL, EUDRAGIT<sup>®</sup> RS or  
a mixture thereof. The polymers are provided as a liquid in an alcoholic solution,  
(preferably about 96%), or hydro-alcoholic solution (preferably 20:80 w/w).  
When the polymer is spread on a surface, the alcohol evaporates and the polymer  
15       forms a polymeric film on that surface. When water present in the mouth tissues  
permeates through the material, the therapeutic agent is released. By proper  
selection of the two polymeric material EUDRAGIT RS and RL, a precise  
release rate is obtained. In fact, by varying the ratio RS/RL the hydrophilic  
property varies accordingly. In particular, if RL is increased, the release rate of  
20       the therapeutic agent is increased. A slow release of a therapeutic agent is  
obtained as well as a mechanical protection on the wounds and a barrier to  
bacteria.

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